

What is claimed is:

1 1. A laser scanning microscope comprising:  
2 at least one selectively switchable micro-mirror arrangement in at least  
3 one of the illumination beam path and detection beam path which is used for the  
4 wavelength selection of at least one of dispersively divided illumination and object  
5 light such as reflection, fluorescence.

1 2. A combination comprising:  
2 at least one micro-mirror arrangement with at least one dispersion  
3 element for wavelength-selective coupling in of illumination light in the direction of  
4 the object and wavelength-selective coupling out of object light in the direction of  
5 ~~detection in a microscope.~~

1 3. A method of using the combination as in claim 2 comprising the  
2 step of using said combination in a laser scanning microscope.

1 4. An arrangement according to claim 1 further comprising at least  
2 one grating and prism as dispersive element.

1 359/385 5. In a laser scanning microscope, an arrangement of a micro-  
2 mirror arrangement for use instead of a confocal pinhole diaphragm in the detection  
3 beam path.

1 359/368 6. In a laser scanning microscope, an arrangement of an LCD  
2 arrangement for use instead of a confocal pinhole diaphragm in the detection beam  
3 path.

1                    7        An optical connection of an arrangement according to claim 1,  
2       the detection beam path comprising dichroic beam splitters for splitting the  
3       detection beam path into individual channels.

1                    8.        The arrangement according to claim 7, wherein the optical  
2       connection is carried out via light-conducting fibers.

1       359/885 9.        In a laser scanning microscope with slit-shaped scanning in at  
2       least one direction comprising:

3                    at least one switchable micro-mirror arrangement; and  
4                    means for switching said at least one switchable micro-mirror  
5       arrangement to provide said slit-shaped scanning.

1       389/389 10.       In a laser microscope, a combination comprising at least one  
2       dispersive element with a selectively switchable transmission diaphragm in a  
3       detection beam path.

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